DOCUMENT RESUME

ED 046 057 CG 006 149

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TITLE	Drugs: A Pilot Study of Minneapolis Secondary School Students.
INSTITUTION	Minneapolis Public Schools, Minn.
PUB DATE	Jun 70
NOTE	83p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*Curriculum Development, Curriculum Planning, *Drug Abuse, Health, *Health Education, Lysergic Acid Diethylamide, Marihuana, Questionnaires, *Secondary School Students, *Student Attitudes, Student Behavior, Student Opinion, Surveys

ABSTRACT

The results of a survey of over 1800 junior high and senior high school students are presented. Purposes of the survey were: (1) to obtain information about the extent of drug use and experimentation; (2) to obtain suggestions for improving Minneapolis Public Schools' health education curriculum; and (3) to pretest the drug education questionnaire which is subsequently to be used city-wide. Response indicated that: (1) 15-25% of the students have tried marihuana; (2) few students indicate regular use of harder drugs; (3) the majority of students say that most drugs are harmful; and (4) most students view both marihuana and tobacco as harmful. School classes, books, magazines, friends, T.V., and movies were given as the major source of drug information. Recommendations for the curriculum are included. (TL)

Research Development Federal Programs

ED 046057

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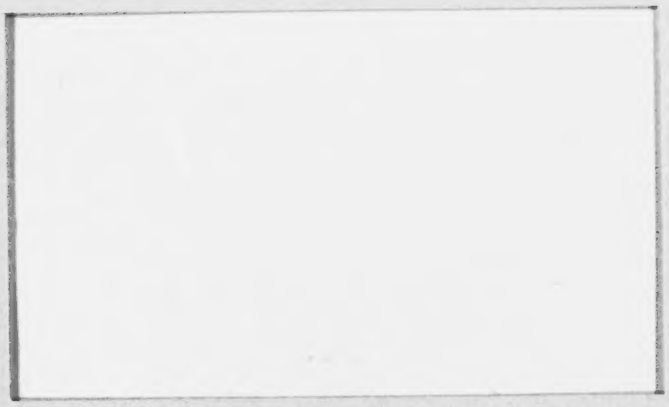

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Drugs: A Pilot Survey of Minneapolis Secondary School Students

June 1970

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October 1970

Research Division
Office of Research, Development
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Drugs: A Pilot Survey of
Minneapolis Secondary
School Students
June 1970

Summary

Over 1800 secondary school students in the Minneapolis Public Schools were surveyed in June 1970 to get their ideas about drugs and drug education. Questionnaires, administered by teachers in five high schools and three junior high schools, were completed anonymously by 1,254 junior high students and 639 senior high students.* See pages 3-5

Purposes of the survey were:

1. To obtain estimates of the extent of drug use and experimentation among secondary school students.

2. To obtain suggestions for improving the health education curriculum of the Minneapolis Public Schools.

3. To pretest a questionnaire on drug education which is to be used for a city-wide survey during the 1970-71 school year.

Responses suggest that 15% to 25% of the surveyed students have tried marijuana at least once. Most students who have tried it have used marijuana only once or "several times." About 2% claim to be regular users. See pages 16-19

Few students report the regular use of harder drugs such as LSD, STP, or heroin, although about 5% say that they have tried LSD at least once.

More than 9 out of 10 students say that most drugs, including LSD, heroin, and benzadrine are harmful.

Eighty-three percent of junior high students and 74% of senior high students regard marijuana as harmful. Tobacco was seen by more students as harmful than was marijuana. For high school students the difference was substantial (tobacco-89%; marijuana-74%). Students were against the legalization of marijuana by a two to one margin. See page 25

Major sources of drug information were:

School classes (48% of students)

Books, magazines (43%)

Friends (30%)

TV and movies (28%)

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* Edison High School was not included in the survey contrary to a recently released newspaper report.

About 13% of the students said that their family was a major source of information while less than 8% cited church, youth groups, personal experience with drugs, and doctors or nurses. However, when asked where they would go with a serious question about drugs most youth said family, friends, drug users, or walk-in-centers. Only 2% to 5% of the students said they would go to school teachers, counselors, or social workers. About one student in seven didn't know where he could go.

See page 7

Major recommendations for curriculum include:

See pages 59-62

1. Present a balanced picture. Don't use scare tactics. Give students the facts and let them make up their own minds. Emphasize the effects of drugs-good and bad.

2. Emphasize the effects of drugs, particularly the physical effects.

3. Give teachers specific training. Clearly define their role in drug education. Students expect them to "know everything" about drugs.

4. Expert assistance should be made available to teachers.

5. Place greater emphasis on giving information on the effects of softer drugs such as sleeping pills and tranquilizers.

6. Note that a substantial number of students, possibly two out of ten, are simply not interested in the topic of drugs. Another three out of ten feel they know enough about drugs. Thus, half the students may not be receptive to drug education attempts.

Research Division
Office of Research, Development
and Federal Programs
Minneapolis Public Schools

October 1970

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Purpose of the Survey

This survey on drug use and attitudes toward drugs among secondary school students was conducted by the Research Division of the Office of Research, Development and Federal Programs, Minneapolis Public Schools, for the Health and Physical Education Department of the school system.

The purpose of the survey was to obtain information which could be used to improve the health education curriculum in Minneapolis secondary schools. To this end, information on drug use and experiementation by students, their knowledge of and attitudes toward drugs was obtained.

Survey Methods

The Questionnaires

Three questionnaires were used to obtain information from students.

Form A: This questionnaire was developed by the Research Division from suggestions received from the school's Committee on Drug Awareness, and from questionnaires used in a variety of settings. Form A was completed by over 1200 students in three junior high schools, and about 170 students in two high schools. A sample of the form is shown in Appendix A.

Form B: Lawrence Pell, a student at the University of Minnesota, developed form B. This questionnaire was distributed to alternate students in the two high schools where form A was given. Pell's study, which focussed on differences between drug users and non-users, is described in a separate report.[1] His questionnaire is mentioned because certain questions added at the request of the Minneapolis Public Schools, are analyzed and reported here for the first time. These questions, on curriculum, were not pertinent to the test of Pell's hypotheses.

Form C: This form was a one page questionnaire prepared and distributed by the Health and Physical Education Department to about 300 students in four high schools. One of these schools was also surveyed with forms A and B. Four questions were asked:

1. What can the schools do to help your younger brothers and sisters develop healthy and realistic attitudes about drugs? (Use your definition of "healthy and realistic"). If you don't have younger brothers and sisters pretend you do.

2. What did you miss in junior high school in drug education that would have been helpful?

3. Do you have any other suggestions for improving drug education in your school?

4. What type of presentation in your health class gave you the most information about drugs?

Questionnaire Administration

Instructions for administering questionnaires A and B are given in Appendix B. Questionnaire A was distributed by home room teachers in three junior high schools and by social studies teachers in two high schools. Questionnaire B was given to alternate students in the two high schools, by the same teachers. That is, odd numbered students in high school classes received form A, while even numbered students received form B. The Pell questionnaire, form B, was not used in the junior high schools.

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1 Pell L. A study of marijuana and other drug use in two Minneapolis High Schools. Unpublished manuscript (Mimeo). Minneapolis: University of Minnesota, June 1970.

Instructions on the cover sheet of questionnaires A and B informed the students of the purposes of the survey: To improve drug education and to pretest the questionnaire for a citywide survey to be conducted at a later date. Instructions also told students that they should not sign their names and that completing the questionnaire was voluntary. Students were informed that individual school results would not be reported by name.

Form C, the one page curriculum questionnaire, was administered by health class teachers, one boy's class and one girl's class, in four high schools.

All questionnaires were distributed during the first week of June 1970.

Sampling

The Sample of Schools

It was not possible to obtain a representative sample of schools. Principals had been informed that new research projects would not be initiated during the few remaining school days following the teacher strike in spring 1970. Because of this committment, schools were selected on the basis of interest expressed by principals or faculties. This selection procedure might have introduced a consistent response bias. Results cannot be generalized to the entire city.

Five of the twelve high schools and three of the fifteen junior high schools in the city were involved in the survey. One inner-city high school and one inner-city junior high were involved.

The Sample of Students

Over 99% of the high school students surveyed were in the eleventh grade. Most of the junior high students, about 70%, were eighth graders with the remaining students about evenly divided between seventh and ninth grades. Table 1 shows the sampling distribution of schools and students.

Nearly all high school students were 16 or 17 years old. About eight out of ten junior high students were 13 or 14 while one in ten was 15 or older and one in ten was under 13.

Respondents to Form A were more likely to be female, particularly in the senior high sample. About 52% of the junior high respondents and 55% of the high school respondents to form A were female. About half the respondents to questionnaire B, the Pell questionnaire, were males; half female. No information on sex of respondents was available for form C. The sex ratio of respondents appeared to approximate the sex ratios of students in attendance.

Despite the voluntary nature of the survey, it appears that all students given the opportunity to participate did, in fact, answer the questionnaire. A number of students, most of them junior high students, were not given adequate time to complete all questions. The number of students not responding to each question is shown in each table.

It is estimated that about 2% of the junior high respondents and less than one percent of the senior high respondents gave answers which should have invalidated their questionnaires. However, due to time pressures, and the pilot nature of the survey, these responses were included during the early stages of the data analysis. (At a later stage, invalid responses were removed for comparisons of male and female students and of Users and Non-users). A small amount of error, probably in the direction of inflating drug usage reports, was introduced by the inclusion of these invalid responses. Invalid responses were identified by extreme reactions (e.g. claims of regularly using all drugs listed; age over 30 etc.) or internally inconsistent answers. About 99 out of 100 students answered the questionnaires consistently and thoughtfully.

Respondents to form A (and presumably to form B since students from the same high school classes were selected on an odd-even basis) appeared to have a normal distribution of grades. Forty-one percent of students described their grades as average, while 43% claimed to have grades somewhat above average. About 10% reported their grades as "excellent" and 6% claimed their grades were below average. Differences in grades of junior and senior high students were slight.

Pell's data (previously unreported) suggest that the median family income of students responding to forms A and B was about $8,000. This figure is speculative since almost one-third of the students did not respond to the income questions. It is evident, however, that a wide economic range was covered by the survey. About one-fifth of responding students apparently came from families with $15,000 annual income-or more while about one-fourth apparently came from families with $6,000 annual income or less. Five percent of the students claimed that their family income for 1969 was about $3,000.

In summary, students responding to questionnaires A and B can not be assumed to be representative of students throughout the city. Schools were not selected in a representative fashion. Students did appear to be representative of the eighth and eleventh grades of their schools. Ages 13-14 in the junior high sample and 16-17 in the senior high sample were the most typical ages of respondents. A slightly higher percentage of responding students were female; apparently reflecting enrollment and attendance patterns. A wide range of economic wealth was represented by students in the two high schools which completed forms A and B. These students appeared to have a normal distribution of grades.

Student responses to questions about drug usage, knowledge, and attitudes toward drugs may not be representative since they are based on only two high schools and three junior high schools (i.e. forms A and B). Student comments and suggestions for an improved drug curriculum are probably representative of eleventh graders in the city's public high schools since the same curriculum questions were asked on all three forms of the questionnaire and five of the twelve high schools were sampled. Responses of junior high students may not be representative since only three of fifteen schools were sampled in a non-random manner.

Table 1

Number of students responding to each questionnaire

	Questionnaire Form:			
School	A	B	C	Total
Senior High				
1	108(SS)	112(SS)	64[a](H)	284
2	64(SS)	56(SS)	--	120
3	--	--	90(H)	90
4	--	--	81(H)	81
5	--	--	64[a](H)	64
Senior High Total	172	168	299	639
Junior High				
6	451(HR)	--	--	451
7	364(HR)	--	--	364
8	439(HR)	--	--	439
Junior High Total	1254	0	0	1254
Junior & Senior High Total	1426	168	299	1893

(SS) = Questionnaire administered in Social Studies Class
(H) = Questionnaire administered in Health Class
(HR) = Questionnaire administered in the Home Room

[a] questionnaires from schools 1 and 5 were mixed during collection. The number of students shown in the table assumes a 50-50 split.

Results

Results are presented under five major headings:

1. Student Knowledge of Drugs
2. Student Use of Drugs
3. Students' Perception of and Attitudes Toward Drugs
4. A Comparison of Male and Female Responses
5. A Comparison of Marijuana Users and Non-Users

All results are based on responses to form A of the questionnaire.

Since the response to form A was heavily weighted by junior high school students (1254 junior high students to 172 senior high students; see Table 1) the combined response is biased in the direction of junior high responses and does not accurately represent all secondary school students.

Results: Student Knowledge of Drugs

Student Interest in Drug Education

About 30% of the 1426 students responding to form A reported that they felt adequately informed about drugs. Almost 50% felt that they were not adequately informed about drugs and wanted to know more. A sizable minority, almost 20%, reported that they were not informed and were not particularly interested in drugs. See Table 2.

Sources of Drug Information

More students reported obtaining information about drugs from school classes than from any other source. Books and magazines were mentioned as the second most frequent source. Major sources of drug information were school classes (48% of students), books, magazines, or newspapers (43%), friends (30%), TV and movies (28%). The family, church, personal experience with drugs, youth groups outside of school and church, and doctors or nurses were not cited as a major source of drug information by large numbers of students. About 13% of the responding students cited the family as a source for most of their information. No other source was cited by more than 7% of the students. See Table 3.

More senior high students (58%) than junior high students (47%) reported school classes as their major source of drug information.

When students have serious questions about drugs they would tend to disregard their present sources of information. More students reported they would go to their parents with serious questions about drugs while only 5% stated that they would consult their teacher. Students named parents (25%), friends (18%), acquaintances who had used drugs (14%), doctors or nurses (14%), or walk-in centers (14%) as resources for their more important questions about drugs. School personnel-teachers, counselors, social workers-would be sought out by less than five percent of the responding students. Fourteen percent of all students reported that they did not know where to go for answers to their serious questions about drugs. See Table 4.

Knowledge of Drugs

Half the students responding to form A stated that they had never seen marijuana. About two-thirds reported that they had never seen LSD. A number of students observed that they had seen the drugs as part of their health education class.

When asked to estimate the cost of an ounce of marijuana or a cap of LSD, the majority of students made unrealistic guesses or said that they did not know. About one-fifth made accurate estimates of the cost of marijuana and another fifth made estimates within the realm of reason. Almost half the students said they did not know the cost of LSD, and an additional 25% made improbable guesses. (Estimates of the current cost of drugs were obtained from public health officials and community contacts). See Tables 5 and 6.

Table 2

Do you feel that you are adequately informed about drugs?
(percent)

Response	Jr. High	Sr. High	Jr. and Sr. High
Yes, know all I need to know	27%	34%	28%
No, but I'm not particularly interested	18	14	17
No, would like to learn more	50	42	49
Other answers	4	10	5
	99%[a]	100%	99%[a]
No. of students responding	1243	170	1413
No. of students not responding	11	2	13

[a] Numbers do not always add to 100% due to rounding

Table 3

Where do you get most of your information about drugs? (percent)

Source of Information	Jr. High (No.=1254)	Sr. High (No. =172)	Jr. and Sr. High (No. =1426)
School classes	47%	58%	48%
Books, magazines, or newspapers	43	47	43
Friends	30	31	30
TV and movies	29	23	28
Family	14	6	13
Church	8	3	7
Personal experience with drugs	6	4	6
Some other source	6	1	5
Youth groups outside of school or church	4	2	4
Doctors or nurses	2	3	2
No Response	a	a	a
All Responses	189%[b]	178%[b]	186%[b]

[a] less than 1%

[b] totals add to more than 100% because some students gave more than one response to the question.

Note: Percentages are underestimates since non-respondents were included in calculations.

Table 4
If I had a serious question about drugs, for an answer I would most likely go to:
(percent)

Source of Information	Jr. High (No.=1214)	Sr. High (No.=171)	Total (No.=1385)
Parents	26%	12%	25%
Friends	19	14	18
Don't Know	14	14	14
Doctor-Nurse	13	20	14
Drug Users	14	14	14
Youth Center	15	4	14
Reference Books	9	23	11
Teacher	5	10	5
Counselor	5	1	4
Someone Else (Other than listed)	4	6	4
Clergyman	3	2	3
Police Liaison Officer	5	4	3
No Response	3	a	3
Social Worker	2	a	2
Other Relatives	2	2	2
All Responses	139%[b]	126%[b]	136%[b]

a less than 1%

b totals add to more than 100% because some students gave more than one response to the question.

Table 5

How much do you think an ounce of marijuana costs?
(percent)

Cost	Jr. High	Sr. High	Jr. & Sr. High
About 25¢	4%	4%	4%
$1.00	9	9	9
$2.00	7	3	7
$3.00	8	14	9
$5.00	30	27	30
$15.00	18	20	18
$25.00	10	11	10
$50.00 or more depending on the quality	13	12	13
Total	99%[a]	100%	100%
No. of students responding	1111	153	1264
No. of students not responding	143	19	162

[a] Numbers do not always add to 100% due to rounding

Note: Estimates of $2.00 to $5.00 were considered "reasonably" accurate.

Table 6

About how much does an LSD Tablet or Cap cost?

Cost	Jr. High	Sr. High	Jr. & Sr. High
$1.00	3%	3%	3%
$3.00	12	16	13
$5.00	16	8	15
$8.00	9	10	9
$10.00	18	5	16
Don't know	43	58	45
Total	101%[a]	100%	101%[a]
No. of students responding	1133	166	1299
No. of students not responding	121	6	127

[a] Numbers do not always add to 100% due to rounding

Note: Estimates of $1.00 to $5.00 were considered "reasonably" accurate.

Nearly all students, about 90%, reported knowing terms such as pot, acid, bad trip and speed. However, knowledge of terms such as yellow jackets, H., Minnesota Green, roach, and hallucinogen was claimed by less than half the respondents. High school students were more familiar with all terms listed than were junior high students. The biggest difference was for the word "hallucinogen" with 45% of junior high students and 77% of senior high students claiming they knew the term. See Table 7.

Four out of ten students claimed they were acquainted with someone who had been on a bad trip. This large number seems somewhat inconsistent with the relatively small number of students (about 6%) who claimed they had been on a bad trip themselves. Several explanations are possible. One, the few students who have taken bad trips were well known. Two, students were acquainted with non-students or students not in the survey who had had the experience. Three, the number of bad trips actually experienced was greatly exaggerated by students who feigned the experience in much the same manner that youth get "drunk" on two beers. See Table 8.

Summary-Student Knowledge of Drugs

It appears that at least half of the youth surveyed know little about drugs. Most of what they know they learned in school, from books, friends, or TV. When faced with serious questions about drugs, however, students do not turn to school sources, but to family, friends, drug users, or doctors. A sizable minority do not know where to go for answers to their questions.

Drug educators may have a difficult time in reaching these youth since half these students either think they already know all they need to know about drugs or else are simply not interested in the topic. Most students do not see teachers as a source of information for their serious questions about drugs.

Table 7

Do you know the meaning of the following terms?
(% of students claiming knowledge of the term)

Term	Jr. High	Sr. High	Jr. & Sr. High
bad trip	90%	98%	91%
pot	89	96	90
speed	90	95	90
Acid	86	95	87
Mary Jane	62	75	64
flashback	61	73	62
hallucinogen	45	77	49
H.	48	58	49
Minnesota green	41	43	41
yellow jackets	32	49	34
roach	17	20	17
No. of students responding	1148 (Minimum)	165 (Minimum)	1313 (Minimum)
No. of students not responding	106 (Maximum)	7 (Maximum)	113 (Maximum)

Table 8

Do you know anyone who has had a bad trip?
(percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Yes	41%	51%	42%
No	59	49	58
Total	100%	100%	100%
No. of students responding	1153	167	1320
No. of students not responding	101	5	106

Results: Student Use of Drugs

If the questionnaire responses can be taken as accurate indicators of actual use, then it appears that about 2% to 3% of the junior and senior high school students surveyed are regular users of marijuana. In addition to these regular users, an additional 20% or so claimed to have used marijuana at least once. About 8 out of 10 junior and senior high school students have never used marijuana, while 2 out of 10 have had some experience with it. Most of these students have tried it once only. See Tables 9-11.

These results are consistent with the findings from the Pell questionnaire, which indicated that about one-fourth of the high school students had tried marijuana. A survey conducted by students at another Minneapolis high school yielded supporting results. That survey suggested that about 16% of the students in that school had smoked something "other than straight tobacco."

When other drugs are considered it appears that the regular use of LSD, and other hallucinogens, inhalants, barbiturates, and opiates is very limited among the students surveyed. About 5% to 8% of the students did report having used LSD or related drugs at least once, however. The claim by 2% of the students that they regularly used heroin is apparently spurious. Further analysis, which removed obviously false responses, showed that the percentage of regular users of hard drugs was essentially zero. See Table 20.

Generally, the percentage of regular users of any of the drugs or other substances named tended to be smaller at the senior high school level than at the junior high school level. This was true for alcohol and marijuana. One exception occurred: the percentage of regular tobacco users doubled at the senior high school level. It should be noted that these are not the same students and a trend from junior high school to high school cannot be proven. However, for the samples involved the percentage of regular smokers at the high school level was definitely much higher than at the junior high school level.

It may be indicative that 7% of the junior high school students and about 3% of the senior high school students reported having had a bad trip. Responses to a number of questions suggest that junior high school students might be more involved in the drug scene than are high school students. This suggestion is somewhat tempered by the estimate that about two percent of the junior high school responses were considered invalid compared with about six-tenths of one percent of the responses made by the high school students. It is believed that these false responses tended to elevate the percentages of drug use. At the same time a factor which may have tended to deflate estimates of drug usage existed. A number of questions were not answered due to insufficient time for questionnaire completion. Since usage rates were computed using all students as a base, rather than all respondents to a specific question, it is possible that the estimated percentage of users was somewhat low. However, responses were consistent throughout the questionnaire and were supported by the findings of Pell and students at another Minneapolis high school.

Despite a small number of students who gave obviously phony or inconsistent responses, typical student reaction to the questionnaire was thoughtful and responsible. The high level consistency of response by 98% to 99% of the students was one of the major findings of the survey.

Table 9

A. Have you ever used any of these or not? (percent)

B. Whether you used them or not, do you consider these things harmful or not? (percent)

Junior High School Students (NO.=1254)	Use				Harmful?	
	Used once	Used several times	Use regularly	Never use	Yes	No
alcohol(beer, wine, whiskey	24%	47%	7%	22%	49%	51%
tobacco(cigars, cigarettes, etc.)	23	29	13	35	86	14
marijuana, pot, grass	7	7	3	84	83	17
LSD, STP, mescaline, speed	3	3	2	93	95	5
benzedrine, dexadrine, methadrine, cocaine, pep pills	4	4	1	90	91	9
glue, gasoline, aerosol paint thinner (as inhalants)	8	6	2	85	91	9
barbiturates or tranquilizers	4	5	2	89	85	15
morphine or heroin	1	a	2	96	95	5
sleeping pills	10	7	2	80	68	32
aspirins	5	62	18	14	27	73
cough syrup	8	63	10	19	24	76

a = less than 1%

Note: At least 1,105 of the 1,254 students responded to each of the "Use" questions. Over 927 students responded to each of the "Harmful" questions. The higher number of non-repondents for the "Harmful" questions occurred because inadequate time was allowed for completing the questionnaire in some classes. The percentage of regular users is probably spuriously high. About 2% of responses shown in this table were later declared invalid.

Table 10

A. Have you ever used any of these or not? (percent)

B. Whether you used them or not, do you consider these things harmful or not? (percent)

	Senior High School Students (No.=172)					
	Use				Harmful?	
	Used once	Used several times	Use regularly	Never use	Yes	No
alcohol(beer, wine, whiskey)	20%	56%	8%	15%	56%	44%
tobacco(cigars, cigarettes, etc)	25	24	25	26	89	11
marijuana, pot, grass	11	7	2	79	74	26
LSD, STP, mescaline, speed	2	3	a	94	98	2
benzedrine, dexadrine, methadrine, cocaine, pep pills	6	2	2	89	92	8
glue, gasoline, aerosol paint thinner(as inhalants)	6	3	a	90	98	2
barbiturates or tranquilizers	3	9	a	88	87	13
morphine or heroin	1	0	a	98	98	2
sleeping pills	10	5	3	82	73	27
aspirins	4	61	19	16	30	70
cough syrup	4	68	5	23	30	70

a = less than 1%

Note: At least 168 of the 172 students responded to each of the "Use" questions. Over 144 students responded to each of the "Harmful" questions. The higher number of non-respondents for the "Harmful" questions occurred because inadequate time was allowed for completing the questionnaire in some classes. The percentage of regular users may be slightly inflated. About six-tenths of one percent of responses shown in this table were later declared invalid.

Table 11

A. Have you ever used any of these or not? (percent)

B. Whether you used them or not, do you consider these things harmful or not? (percent)

Junior and Senior High School Students (No.=1426)

	Use				Harmful?	
	Used once	Used several times	Use regularly	Never use	Yes	No
alcohol,(beer, wine, whiskey)	23%	48%	7%	21%	50%	50%
tobacco(cigars, cigarettes, etc)	23	28	15	34	87	13
marijuana, pot, grass	7	7	3	83	82	18
LSD, STP mescaline, speed	3	3	1	93	95	5
benzedrine, dexadrine, methadrine, cocaine, pep pills	5	4	1	90	91	9
glue, gasoline, aerosol paint thinner (as inhalants)	7	5	1	86	92	8
barbiturates or tranquilizers	4	5	2	89	85	15
morphine or heroin	1	a	2	96	95	5
sleeping pills	10	7	2	81	68	32
aspirins	5	62	18	14	27	73
cough syrup	8	64	9	19	25	75

a = less than 1%

Note: At least 1,273 of the 1,426 students responded to each of the "Use" questions. Over 1,071 students responded to each of the "Harmful" questions. The higher number of non-respondents for the "Harmful" questions occurred because inadequate time was allowed for completing the questionnaire in some classes. The percentage of regular users may be slightly inflated. About 2% of the responses shown in this table were later declared invalid.

Results: Students' Perceptions of and Attitudes Toward Drugs

Harmfulness of Drugs

Most students felt that drugs and other substances such as alcohol and tobacco are harmful to their health. More than 9 out of 1) students said that LSD, glue and other inhalants, benzedrine, morphine and heroin are harmful. Tobacco was seen by more students as harmful than was marijuana, although the difference was slight - 87% to 82%. Attitudes of senior and junior high students were comparable with one exception; more junior high students than senior high students saw marijuana as harmful. While about 90% of the senior high students saw tobacco as harmful, only 74% of these students felt that marijuana was harmful. At the junior high level, 86% saw tobacco as harmful and 83% saw marijuana as harmful. See Tables 9 and 10.

Addiction

About one-fourth of the students felt that marijuana was not "addictive." About 3 out of 10 felt that a person could become addicted to marijuana and an additional 4 out of 10 felt that the use of marijuana could lead to the use of harder drugs such as heroin. More junior high school students than senior high school students believed that marijuana could become directly addictive. See Table 12. (No distinction was made between "addiction" and "dependency" in the survey).

In Pell's sample, about 6 out of 10 respondents reported that marijuana usage leads to using psychedelics or "other drugs."

General Concern About Drug Use

Substantial differences between junior and senior high school students' perceptions of the general concern about drug use among teenagers were found. Fifty-five percent (55%) of the senior high students felt that the general concern about drug use among teenagers was less than it should be. Only 37% of the junior high students felt it was less than it should be. Conversely, 21% of the high school students and 29% of the junior high school students felt too much concern was being shown. See Table 13.

Student Concern

How would you feel if your younger brother or sister smoked marijuana? When asked this question, 8% of the senior high school students said they would not be concerned and 17% of the junior high students expressed no concern. Two-thirds of the students in both junior and senior high school stated that they would be disturbed if their younger brother or sister smoked marijuana. The remaining students gave other qualified answers. See Table 14.

A majority of students did not feel that drug abuse was a serious problem in their own school. However, about 1 in 4 stated that they did not know whether it was or not and about 1 in 5 felt that there was a serious problem. More junior high school students than senior high students felt there was a serious drug problem in their school. See Table 15.

Table 12

Do you think a person can become addicted or "hooked" from smoking marijuana?
(percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Yes, can become addicted to smoking marijuana.	31%	15%	29%
Yes, in the sense that it usually leads to the use of harder drugs.	44%	45%	44%
No, no more than a person becomes hooked on cigarettes.	19%	24%	20%
Other responses	6%	15%	7%
Total	100%	100%	100%
No. of students responding	1,031	170	1,201
No. of student not responding	223	2	225

Table 13

Do you think that the general concern about drug use among teenagers is:
(percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Much greater than it should be	17%	7%	16%
Somewhat greater than it should be	12	14	12
About as it should be	17	12	16
Somewhat less than it should be	23	31	24
Much less than it should be	14	24	15
Don't know	17	12	17
All Responses	100%	100%	100%
No. of students responding	1088	170	1258
No. of students not responding	166	2	168

Table 14

How would you feel if your younger brother or sister smoked marijuana?
(percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Don't have a younger brother or sister	27%	28%	27%
I would be disturbed	48	48	48
I wouldn't worry about it	12	6	12
Other	12	18	13
All Responses	99%[a]	100%	100%
No. of students responding	1067	168	1235
No. of students not responding	187	4	191
(Percentages below based on students with younger siblings only)			
I would be disturbed	66%	67%	66%
I wouldn't worry about it	17	8	16
Other	17	25	18
Total	100%	100%	100%
No. of students with younger brothers or sisters	774	121	895

[a] Numbers do not always add to 100% due to rounding

Table 15

Do you really think there is a serious drug problem among the students in your school? (percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Yes	22%	15%	21%
No	52	52	52
Don't Know	26	32	27
All Responses	100%	99%[a]	100%
No. of students responding	1096	168	1264
No. of students not responding	158	4	162

[a] Numbers do not always add to 100% due to rounding

If students' claims about their use of drugs are reasonably valid, then many students do not have very accurate perceptions of the extent of drug use by their classmates. For example, about one out of five junior high students estimated that marijuana had been tried by at least half of the students in their school. An additional one out of five estimated the use rate to be five percent or less. Since about 17% of the junior high students actually claimed to have tried marijuana both estimates are inaccurate.

Typically, students overestimated the use of drugs in their school. Assuming that a range of 6% to 30% is a reasonably accurate estimate of actual use, then 31% of the students overestimated the percentage of students trying marijuana and 21% underestimated usage. Similar findings were noted for other drugs and for senior high students. See Tables 16 and 17.

Legalization of Marijuana

Surveyed students were against the legalization of marijuana by at least a two to one majority. Over half (56%) of all students said they definitely would not be in favor of legalization. Only 17% felt that marijuana should be legalized while the remaining students gave qualified answers. (Pell's sample showed 63% against legalization). A slightly higher percentage of junior high school students, than high school students, were in favor of legalization. See Table 18.

Students were asked what their reaction would be if marijuana were to be legalized. About 6 out of 10 said that they would not try marijuana under any circumstances. In this respect, more junior high school students reported they were against trying marijuana than did senior high school students (59% to 45%). About 1 out of 10 students at both school levels said that they might try marijuana if it were legalized.

Roughly 1 out of 3 students at the senior high school level said that the laws relating to marijuana would not affect their decision to use it or not to use it. At the junior high school level, 22% of the students said that the laws would not affect their behavior. (The predetermined response categories for this question obscure the meaning of the responses. These categories suggest that two questions were being asked: (1) Would you try marijuana? (2) Would you obey the law? Possibly senior high students focussed their attention on the "legal" question while junior high students focussed on the "use" question to a greater degree. The question should be changed). See Table 19.

Differences between junior and senior high school students were evident in this series of questions. Junior high school students tended to believe, in higher proportions, that marijuana could be addictive. They were more likely to believe that marijuana is harmful and that marijuana smoking was a serious problem in their own school. Additionally, more were against trying marijuana even if it were to be legalized.

In seeming paradox, more junior high school students also claimed that the general concern about drugs was greater than it should be, more were in favor of legalizing marijuana than were high school students, and fewer would be concerned if their younger brother or sister were to smoke marijuana. This apparent paradox may result from a bimodal distribution among junior high school students. Possibly there was a small minority of pro-drug students and another group which was strongly anti-drug.

Table 16

What percentage of the students in your school do you think has tried these things at least once?

Item	Junior High Students							
	1% or less	2-5%	6-10%	11-20%	21-30%	31-40%	41-50%	Over 50%
Alcohol (beer, wine, whiskey)	a	1	2	3	3	3	12	75
Tobacco (Cigarettes, cigars, etc.)	a	a	1	1	2	4	11	80
Marijuana, pot, grass	6	15	15	16	17	10	14	7
LSD	18	27	21	12	11	5	4	2
Benzedrine, dexadrine, methadrine, cocaine, pep pills	16	28	21	13	10	5	4	6
Glue, gasoline, aerosol paint thinner (as inhalants)	10	21	17	16	14	6	8	9
Barbiturates or tranquilizers	17	24	17	14	11	5	6	6
Morphine or heroin	36	30	13	8	5	2	3	2
Sleeping pills	11	20	17	12	13	6	8	13
Aspirin	4	3	4	3	3	2	5	76
Cough syrup	5	4	5	4	3	3	5	72

Minimum number of students responding was 1013
a = less than 1%

Table 17

What percentage of the students in your school do you think has tried these things at least once?

Item	Senior High Students							
	1% or less	2-5%	6-10%	11-20%	21-30%	31-40%	41-50%	Over 50%
Alcohol (beer, wine, whiskey)	0	a	0	0	a	3	9	87
Tobacco (Cigarettes, cigars, etc.)	0	0	0	0	2	1	10	87
Marijuana, pot, grass	a	7	16	19	17	17	17	7
LSD	11	29	27	14	10	3	3	2
Benzedrine, dexadrine, methadrine, cocaine, pep pills	9	22	20	17	20	3	3	5
Glue, gasoline, aerosol paint thinner (as inhalants)	7	21	21	14	19	7	5	5
Barbiturates or tranquilizers	7	23	16	22	16	7	5	3
Morphine or heroin	32	38	13	9	3	2	2	0
Sleeping pills	6	16	17	13	14	11	10	13
Aspirin	1	7	9	4	4	a	4	70
Cough syrup	2	8	7	5	4	3	8	63

Minimum number of students responding was 146
a = less than 1%

Table 18

Do you think the use of marijuana or pot should be legalized? (percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
Yes, legalize it	18%	13%	17%
No, should not be legalized	56	55	56
I'm not sure	23	25	23
Other responses	3	7	3
All Responses	100%	100%	99%[a]
No. of students responding	1082	171	1253
No. of students not responding	172	1	173

[a] Numbers do not always add to 100% due to rounding

Table 19

What would your reaction be if marijuana were legalized? (percent)

Response	Jr. High	Sr. High	Jr. & Sr. High
I wouldn't try it even if it were legal	59%	45%	57%
I might try it if it were legal, but not unless it were legalized	11	13	11
The legality of it doesn't influence me. I'll smoke it, or not smoke it as I please	22	34	23
I don't know	8	9	9
Total	100%	101%[a]	100%
No. of students responding	1029	168	1197
No. of students not responding	225	4	229

[a] Numbers do not always add to 100% due to rounding

Results: Comparison of Male and Female Responses

To see if there were important differences in male and female responses, a comparison of responses to questionnaire A was made for junior and senior high school students separately by sex. (By the time this analysis was performed, the samples had been purged of all questionnaires which appeared to have falsified answers). Comparisons were made between 476 males and 520 females in the three junior high schools and 72 males and 92 females in the two high schools surveyed.

A substantial number of differences in the opinions of male and female students was revealed. These differences suggested a need for a curriculum which gears itself to sex differences. Some reactions to previous drug education programs are also reported.

Student Interest in Drug Education

One of the more consistent findings of sex differences was that more male students simply were not interested in drug education when compared with female students. This difference existed at both the junior and senior high school levels.

Sources of Drug Information

For males and females the major sources of drug information were school classes, books, friends, and TV or movies. Some important variations occurred.

At the junior high level, female students reported that they got most of their information about drugs from books, magazines and newspapers (52%), school classes (49%), and TV or movies (31%). (Percentages add to more than 100% since a number of sources were cited by some students). In senior high, major sources of information for girls were school classes (77%), books (59%), friends (30%), and TV or movies (24%).

Male students, in junior high, favored school classes (48%), books (38%), friends (25%), and TV or movies (23%) as major sources of drug information. In the senior high sample, males favored books or magazines (48%), school classes (39%), friends (35%), and TV or movies (22%).

The major differences was in the much higher percentage of girls at the senior high level who reported school classes as a major source of information. While fewer senior high males saw school classes as an information source-39% compared with 48% in junior high-a much larger percentage of senior high female students cited school classes-77%, versus 49% in the junior high sample.

Since female students at the high school level also claimed greater knowledge of terms related to drugs, the possibility exists that the health education classes for females were more successful in reaching their students than were the health education classes for males. This possibility must be tempered by the finding that male students also tended to receive somewhat lower grades than did the female students. Whether male students got lower grades and were less interested in drug education because of the quality of course offerings, or whether they got lower grades because they

were basically less interested in academic offerings cannot be determined from the data here. Whatever the reason, it does appear that female students, particularly at the high school level were getting more benefit out of, and finding more interest in, their health education classes.

This observation was supported somewhat by the finding that 14% of the female students in high school claimed that they would go to their teacher if they had a serious question about drugs while only 4% of the male students said that they would go to their teacher. Despite differences, however, males and females generally perceived the same sources of help for serious questions about drugs. In junior high the major sources were parents, friends, and the YES Center or other walk-in counseling centers. In senior high the major sources were doctors or nurses, parents-although to a much lesser degree than in junior high-friends, and library or reference books. The walk-in centers were not perceived as a source of help by many high school students compared with junior high school students.

About 15% of the males and females at both school levels said they did not know who they could go to for an answer to a serious question!

Knowledge of Drugs

It appears that females have more knowledge of drugs than do males-at least in an academic sense-since more males claim to have experimented with the use of marijuana. The apparent superiority of female knowledge was manifested mainly at the senior high school level. Thus, more females claimed to know various terms related to drugs than did males at the high school level, but not at the junior high school level. Both sexes made similar estimates of the cost of marijuana and LSD but females professed to know more people who have taken bad trips than did males, while a slightly higher percentage of males claimed to have been on a bad trip themselves. More males claimed to have seen marijuana and LSD although the difference between the sexes was small.

Student Use of Drugs - Sex Differences

More male students than female students claimed to have tried marijuana, although the difference in the percentage of regular users was very small. Pell's report indicated that 32% of the males and 17% of the females in senior high school had tried marijuana at least once. Our findings are similar, 25% of the males and 17% of the females. The slight difference between our findings and Pell's is probably due to sampling fluctuation. At the junior high level little difference between male and female students who claimed to have tried marijuana was found. About 15% of the males and 12% of the females claimed to have tried marijuana at least once.

No practical difference existed in the percentage of males and females who claimed to have tried alcohol, tobacco, LSD, glue, or heroin, although there was a suggestion that more females are regular smokers. A higher percentage of females also reported that they had tried or were regular users of barbiturates and patent medicines such as aspirins, sleeping pills, and cough syrup.

Students' Perceptions of and Attitudes Toward Drugs: Sex Differences

Female students took a more benign view of drugs and drug usage than males. Thus, a higher percentage of female students did not see alcohol, marijuana, sleeping pills, aspirins, cough syrup, barbiturates and benzedrine as harmful substances. At the high school level there was one exception; a higher percentage of female students saw alcohol as harmful. It should be emphasized that the differences being discussed here are relative. The majority of male and female students saw nearly all of these substances as harmful; however, fewer females relative to males, saw them as harmful.

Addiction

At the junior high school level more female students believed that the use of marijuana could lead to an addiction to harder drugs (51% to 36%). At the senior high school level however this difference did not exist. Slightly less than half the students thought that marijuana could lead to addiction to harder drugs while about 15% felt that marijuana could be directively "addictive."

General Concern

There was little difference in perceptions of the general concern about drug use among teenagers. Possibly, more female students think that the concern for drug use among teenagers is somewhat over-played. This possibility is stronger at the senior high school level. About 26% of the senior high females thought that the amount of general concern shown was more than was necessary while 16% of the male students felt this way.

Student Concern

Male and female students had similar reactions to the possibility that their younger brothers and sisters might become involved with drugs. The majority of the students expressed concern.

Male students did differ from female students in their perceptions of the seriousness of drug problems in their own schools however. While about one out of five students of both sexes at the junior and senior high level felt there was a serious problem in their school, at the senior high level about 60% of the males said there was no serious problem while only 46% of the females felt there was no problem. A higher percentage of females at the senior high school level said that they simply did not know whether there was a serious problem in their school or not.

Legalization of Marijuana

No difference between sexes at the junior high school level in opinions about legalizing marijuana occurred. About 6 out of 10 students said they were against the legalization of marijuana, 17% said they were for legalization and the remaining students gave qualified answers. At the senior high level 47% of the males were against legalization and 62% of the females were against it. However, there was no increase in the percentage of senior high males over junior high males who were for the legalization of marijuana. More senior high males gave qualified answers.

The percentage of females in favor of legalization dropped to 9% at the senior high level.

Students were asked what their reaction would be if marijuana were legalized. At the junior high level there was no difference between the sexes. About 60% said they would not use marijuana under any conditions and about 20% said that the legalization of it made no difference to them and they would use it or not depending upon their own wishes. At the high school level some differences did occur. About 50% of the females said they would not use marijuana under any condition, and 39% of the males said this. About 18% of the males and 9% of the females said that they might try marijuana if it were legalized.

Table 20 summarizes responses by sex.

Table 20
Questionnaire Responses by Sex
(percent)

Question	Response	Jr. High Male N=476	Jr. High Female N=520	Sr. High Male N=72	Sr. High Female N=92
Do you feel that your are adequately informed about drugs?	Yes, know all I need to know.	33%	24%	36%	35%
	No, but I'm not particularly interested.	22	14	19	8
	No, would like to learn more.	43	57	44	41
Drug education:	Should be required for all students.	33	36	39	69
	Should be available to those students who want it.	55	56	52	26
	Should not be taught in the schools.	12	8	8	4
Have you ever actually seen a marijuana cigarette?	Yes	50	42	54	47
Have you ever actually seen LSD?	Yes	31	27	27	29
Do you know the meaning of the following terms?					
	Pot	91	89	97	96
	Yellow jackets	33	28	35	60
	Roach	17	13	15	20
	Speed	91	85	94	96
	Bad trip	89	90	99	99
	Mary Jane	65	62	64	81
	Acid	87	85	96	95
	H	48	47	51	62
	Hallucinogen	48	42	67	84
	Minnesota Green	47	33	38	45
	Flashback	58	61	62	81
Have you ever had a bad trip?	Yes	7	4	3	2
Do you know anyone who has?	Yes	38	41	44	56

Table 20 (continued)

Question	Response	Jr. High Male N=476	Jr. High Female N=520	Sr. High Male N=72	Sr. High Female N=92
How old were you on your last birthday	Eleven	1	a	0	0
	Twelve	6	10	0	0
	Thirteen	42	48	0	0
	Fourteen	40	35	0	0
	Fifteen	10	6	1	0
	Sixteen	a	a	51	49
	Seventeen	0	0	44	50
	Eighteen	0	0	3	1
What grade are you in?	Seven	14	13	0	0
	Eight	70	74	0	0
	Nine	16	13	0	0
	Ten	0	0	1	0
	Eleven	0	0	97	100
	Twelve	0	0	1	0
Which of the following best describes the grades you usually receive in school?	Excellent	8	8	6	11
	Above Average	40	47	40	42
	Average	44	39	49	43
	Below Average	8	5	6	2
	Very Low	a	a	0	1
How much do you think an ounce of marijuana costs?	About 25 cents	6	2	5	4
	$ 1.00	9	8	8	8
	2.00	7	7	3	2
	3.00	7	9	13	15
	5.00	30	32	23	32
	15.00	18	19	26	13
	25.00	10	10	11	11
	50.00 or more, depending on the quality	14	12	11	14
About how much does an LSD tablet or cap cost?	Don't know	40	46	64	57

a Less than 1%

N.B. Invalid responses were removed

Table 20 (continued)

Question	Response	Jr. High Male N=476	Jr. High Female N=520	Sr. High Male N=72	Sr. High Female N=92
What percentage of the students in your school do you think has tried these things at least once?	Alcohol(beer, wine, whiskey)	75	79	85	85
	Tobacco (cigarettes, cigars,etc.)	79	80	85	80
	Marijuana, pot, grass	15	23	18	28
	LSD, STP, mescaline, speed	5	10	5	9
	Benzedrine, dexadrine, methadrine, cocaine, pep pills	9	9	8	17
	Glue, gasoline, aerosol pain thinner (as inhalants)	10	19	9	17
	Barbiturates or tranquilizers	10	10	9	19
	Morphine or heroin	4	5	3	4
	Sleeping pills	12	17	14	24
	Aspirins	99	99	99	99
	Cough Syrup	95	99	95	90
Do you think that the general concern about drug use among teenagers is:	Much greater than it should be.	18	16	6	8
	Somewhat greater than it should be.	9	14	10	18
	About as it should be .	15	19	13	12
	Somewhat less than it should be.	24	22	28	32
	Much less than it should be.	16	12	27	22
	Don't know.	18	16	17	9
Do you really think there is a serious drug problem among the students in your school?	Yes	23	19	13	18
	No	54	53	60	46
	Don't know	23	28	28	37
How would you feel if your younger brother or sister smoked marijuana?	I don't have younger brother or sister.	28	28	26	29
	I would be disturbed.	47	50	50	48
	I wouldn't worry about it.	14	9	9	2
	Other	11	13	16	21

Table 20 (continued)

Question	Response	Jr. High Male N=476	Jr. High Female N=520	Sr. High Male N=72	Sr. High Female N=92
Do you think the use of marijuana or pot should be legalized?	Yes, legalize it.	18	16	17	9
	No, should not be legalized.	59	57	47	62
	I'm not sure.	21	25	24	27
	Other answers	2	3	13	2
How do you feel about alcohol and marijuana?	Both are harmful, but alcohol is more harmful than marijuana.	11	4	9	5
	Both are harmful, but marijuana is more harmful than alcohol.	43	43	32	36
	Both are equally harmful?	23	29	23	32
	Alcohol is harmful, but marijuana is not.	2	3	4	3
	Marijuana is harmful, but alcohol is not.	11	11	16	3
	Neither is particularly harmful.	10	12	16	20
Do you think a person can become addicted or "hooked" from smoking marijuana?	Yes, can become addicted to marijuana.	36	27	14	16
	Yes, in the sense that it usually leads to the use of harder drugs.	36	51	47	47
	No, no more than a person becomes hooked on cigarettes.	21	16	19	24
	Other answer	6	5	19	12
What would your reaction be if marijuana were legalized?	I wouldn't try it even if it were legal.	60	60	39	50
	I might try it if it were legal, but not unless it were legalized.	12	10	18	9
	The legality of it doesn't influence me. I'll smoke it, or not smoke it, as I please.	21	20	35	32
	I don't know.	8	10	8	9

Table 20 (continued)
Junior High

Item		Used Once	Used Several Times	Use Regularly	Never Use	(% "yes") Harmful? Male	Female
Alcohol (beer, wine, whiskey)	Male	22	47	9	22	52	45
	Female	27	45	5	23		
Tobacco (cigarettes, cigars, etc.)	Male	26	29	10	35	90	83
	Female	21	29	13	37		
Marijuana, pot, grass	Male	6	7	2	85	85	85
	Female	7	4	2	88		
LSD, STP, mescaline, speed	Male	3	2	0	95	96	96
	Female	3	1	0	95		
Benzedrine, dexadrine methadrine, cocaine, pep pills	Male	4	4	2	92	93	91
	Female	4	3	0	92		
Glue, gasoline, aerosol paint thinner (as inhalants)	Male	7	5	0	88	94	91
	Female	8	6	0	86		
Barbiturates or tranquilizers	Male	5	5	0	90	87	86
	Female	3	3	a	91		
Morphine or heroin	Male	2	0	0	97	96	96
	Female	0	a	a	98		
Sleeping pills	Male	8	5	1	85	71	66
	Female	12	8	1	79		
Aspirins	Male	6	59	19	16	31	22
	Female	5	67	19	9		
Cough syrup	Male	6	62	10	22	29	17
	Female	10	68	9	13		

a Less than 1%

Table 20 (continued)
Senior High

Item		Used Once	Used Several Times	Use Regularly	Never Use	(% "Yes") Harmful? Male	Female
Alcohol (beer, wine, whiskey)	Male	17	62	6	15	49	62
	Female	23	53	9	15		
Tobacco (cigarettes, cigars, etc.)	Male	22	32	21	25	90	90
	Female	29	17	27	26		
Marijuana, pot, grass	Male	16	6	3	76	75	74
	Female	9	7	1	84		
LSD, STP, mescaline, speed	Male	1	4	0	94	98	99
	Female	3	2	0	95		
Benzedrine, dexadrine, methadrine, cocaine, pep pills	Male	4	1	0	94	97	89
	Female	9	3	2	86		
Glue, gasoline, aerosol paint thinner (as inhalants)	Male	7	4	0	89	97	99
	Female	7	1	0	92		
Barbiturates or tranquilizers	Male	1	3	0	96	92	99
	Female	4	13	0	83		
Morphine or heroin	Male	0	0	0	100	98	99
	Female	2	0	0	98		
Sleeping pills	Male	9	4	3	84	73	75
	Female	12	4	2	81		
Aspirins	Male	0	63	14	23	27	30
	Female	8	62	21	9		
Cough syrup	Male	1	63	6	30	28	30
	Female	5	74	3	18		

Results: A Comparison of Marijuana Users and Non-Users

A comparison was made of junior high students who professed use of marijuana and junior high students who claimed that they never used marijuana. The small number of students in the senior high sample made comparisons at that level impractical.

"Users" were identified as all surveyed junior high students who claimed that they used marijuana "regularly" or "several times." Seventy students were in this group, with 15 of these students claiming regular use and 55 students claiming to have tried the drug at least several times. "Non-users" were 865 junior high students who claimed they "never used" marijuana. Obviously not all students identified as Users by this procedure can be considered as bonafide drug users or addicts. Nor is it certain that all students who claimed non use had, in fact, never tried marijuana. Nevertheless, it was believed that the two groups thus identified would respond to the questionnaire in a different manner and would represent two different schools of thought about drugs.

Students who claimed to have used marijuana one time only, who did not answer the usage questions, and who gave invalid responses were excluded from this comparison (N=319).

Knowledge of Drugs by Users and Non-Users

Substantial differences in their claimed knowledge of drugs occurred for Users and Non-users. The majority of Users claimed that they were adequately informed about drugs and knew all that they needed to know while about one-fourth of the Non-users felt that they already had sufficient information. Almost one out of five Non-users said they were not particularly interested in drug education but only 6% of the Users were not interested. A majority of Non-users reported that they would like to learn more about drugs while about one-third of the Users also felt that they needed more information.

Substantial differences in students' major sources of information about drugs were revealed for Users and Non-users. By far the most important source of information for Users was their friends. Other important sources in order were: personal experience with drugs; books, magazines and journals; and school classes. For Non-users the most improtant source was school classes. Other important sources were books, TV and movies, and friends. Users, compared with Non-users, relied on their friends for information about drugs by a three to one ratio. Non-users, compared with Users, relied on school classes for information by a three to one ratio.

Students classified as drug users were mainly interested in learning more about physical effects, laws relating to drugs, psychological and personality effects, and treatment. Non-users also emphasized interest in physical effects and personality and psychological effects. In addition, they wanted to know why perople use drugs. Generally, more Non-users than Users expressed interest in all kinds of information.

If drug users had a serious question about drugs they would turn to their friends, or to acquaintances who are also drug users, for answers. Very rarely would they turn to their parents, social workers, teachers, counselors, or medical people for answers. About five percent claimed that they would not know where to go for an answer. Non-users had much different sources. About 30% of them state that they would go tc their parents for an answer (compared with only 3% of the Users who saw their parents as a source of information). The next most frequent source for Non-users was doctors and nurses (11%). But even Non-users rarely consider school personnel as possible sources of assistance. Three times as many Non-users as Users state that they do not know where to go for an answer to their serious questions about drugs. In summary, Users see their friends or other users as sources of support and information and they are disinclined to go to parents, teachers, social workers, counselors, doctors, or the church. A relatively small number, about 15%, cite the YES Center-or other walk-in centers-as a resource. Non-users turn to their parents or to doctors or nurses for answers. More of them do not know where to go. Non-users also are disinclined to go to school personnel (social workers, counselors, teachers) and the church. They are much less likely to go to friends for information than are Users.

Ninety-nine percent of the Users claimed they had seen a marijuana cigarette and more than 9 out of 10 said that they had seen LSD. By comparison, slightly over one-third of the Non-users said they had seen marijuana and about one out of five said they had seen LSD.

Users were much more familiar with the jargon related to drugs than Non-users. For both groups the least known term was the word "roach." More than six out of ten Users claimed they knew the meaning of this term while less than one out of ten Non-users claimed such knowledge.

About four out of ten Users claimed that they had had a bad trip at one time or another and almost nine out of ten Users stated that they knew someone who had had a bad trip. Only one out of fifty Non-users claimed having had a bad trip and about one-third of them claimed acquaintanceship with some person who had had the experience.

In estimating the cost of an ounce of marijuana the majority of Users made estimates which were within reasonable accuracy of the actual cost on the present market. Less than half the Non-users made similarly accurate estimates.

There is no question that the students categorized as Users had more knowledge of, or at least claimed more knowledge of, matters relating to drugs than did students classified as Non-users. To the extent that these claims could be verified by cost estimates of certain drugs, it appears that the responses were fairly accurate representations of the truth. Users claimed greater knowledge of drugs and made reasonable estimates of the cost of drugs. Non-users claimed less knowledge and made less accurate estimates of drug costs.

Comparison of Users and Non-Users-Use of Drugs

Students classified as users reported a much greater use of drugs and related substances of all kinds than did non-users. By definition, 100% of the Users had tried marijuana at least several times. Twenty-one percent of the Users claimed that they used marijuana regularly and over half the Users reported that they had tried LSD at least once, although less than 2% claimed regular use of LSD. Forty-one percent of the Users, but over 99% of the Non-users claimed that they had never tried LSD.

Alcohol and tobacco usage also differed strikingly for the two groups. Sixty percent of the Users claimed they used tobacco on a regular basis while 100% claimed that they had tried tobacco at least once. By contrast, 5% of the Non-users said that they used tobacco regularly and 42% of the Non-users had never used tobacco. Almost 100% of the Users had tried alcohol at least once and 23% of these students were regular users of alcohol. Less than 5% of the Non-users claimed regular use of alcohol although 73% had tried alcohol at least once. Similar differences were revealed for all of the eleven substances listed including benzedrine, morphine, glue, and barbiturates. About 31% of the Users claimed regular use of aspirins compared with 17% of the Non-users, and about 6% of the Users claimed that they used sleeping pills regularly while less than 1% of the Non-users made regular use of such pills.

In his study of users and non-users in high schools, Pell arrived at similar conclusions. Pell reported that marijuana usage tends to accompany the use of other drugs. He also noted that all marijuana users had used alcohol and that a higher percentage of users had used tobacco than did non-marijuana users.

About 4 out of 10 Users claimed they had had a bad trip on at least one occasion. This high percentage of unfavorable side effects from the use of marijuana or other related substances among a group of students which certainly contains many individuals who have not had extensive experience with drugs indicates a high probability of unfavorable effects associated with the use of drugs, assuming the reports are valid. By contrast, about 2% of the Non-users claimed they had had a bad trip. The majority of Users, 88%, also claimed that they knew someone who had a bad trip while about one-third of the Non-users were thus acquainted.

Perceptions of, and Attitudes Toward, Drugs Held by Users and Non-Users

Harmfulness of Drugs

While fewer Users than Non-users considered marijuana and other related substances as harmful, the majority of Users consider most drugs as harmful. Thus, about 85% of the students who use marijuana consider tobacco, LSD, benzedrine, glue, and heroin as harmful. About half of the Users consider alcohol and sleeping pills as harmful while from 20% to 30% consider aspirin, cough syrup, and marijuana as harmful. About three times as many Users consider tobacco as harmful as they do marijuana and about twice as many think alcohol is harmful compared with marijuana. Users tend to classify marijuana in the same category as aspirins and cough syrup in terms of the harm that might be expected.

By contrast more than 9 out of 10 Non-users considered marijuana harmful. More Non-users considered all the substances listed as harmful than did Users with the exception of alcohol. About 50% of both groups felt alcohol was harmful.

Consistently, throughout the study, it was revealed that students of all groups had a strong antipathy to the use of morphine or heroin with only slightly less antipathy to the use of LSD, speed and similar substances. Even among the User group, almost 9 out of 10 students reported that they considered these substances harmful.

Possibly the biggest difference between attitudes of Users and Non-users was in their relationship to the use of marijuana. While about 1 out of 4 Users saw marijuana as harmful, more than 9 out of 10 Non-users saw it as harmful.

Addiction

The majority of marijuana users did not believe that a person could become addicted or hooked from smoking marijuana. About one out of five Users thought that marijuana usage could lead to harder drugs and about one out of ten felt that marijuana could be directly addicting. By contrast, one-third of the Non-users thought that a person could become addicted to marijuana and 45% felt that it could lead to the use of harder drugs. Pell's high school sample showed that 63% of the users believe that marijuana did not lead to the use of other drugs while 74% of students not using marijuana felt that it did lead to the use of other drugs. Clearly there is a significant difference of opinion among Users and Non-users on the long range effects of marijuana smoking.

General Concern

One out of every two students classified as marijuana users felt that the general concern about drug use among teenagers was greater than it should be. Slightly over one-fourth of the Non-users shared this sentiment. However, about four out of ten Non-users felt that the general concern was less than it should be and about two out of ten Users agreed with them.

Student Concern

Relatively little difference between Users and Non-users occurred in perceptions of the seriousness of drug problems among the students in their own school. About 28% of the Users and 20% of the Non-users felt that a serious problem did exist in their school.

Legalization of Marijuana

Feelings about the possible legalization of marijuana were polarized for the two groups of students. While three out of four Users felt that legalization should take place, almost two-thirds of the Non-users felt that it should not be legalized. About 10% of the Users felt that marijuana should not be legalized and about 10% of the Non-users felt that it should be legalized. A substantially greater number of Non-users were not sure of whether or not marijuana should be legalized (23% to 13%).

A similar polarization existed in the reaction of students to the question of how they would feel if marijuana usage were to become legal. While almost 8 out of 10 Users reported that the legality would not influence them since they would smoke it or not as they pleased, almost two-thirds of the Non-users would not try marijuana even if it were to become legal. About 14% of the Non-users said that the legality would not influence them either way.

Slightly less than 10% of the students categorized in the User class said that they wouldn't try marijuana even if it were legal. An additional 8% said that they might try it if it were legal but not unless it were legalized. These non sequitur responses from students classified as "Users" suggest some degree of error in the classification process. Possibly as many as 20% of the students classified in the User group were not really users. Nevertheless, the fact that such substantial differences between User and Non-user groups were revealed by the data analysis indicates that the categorization process did effectively separate two groups of people who had substantially different opinions and experiences with marijuana and other drugs.

Differences in the Sample of Drug Users and Non-Users

Pell reported that there were no significant age differences or differences in grades achieved by the students in his high school sample. Since his sample was selected from eleventh grade students a very limited range of age could be observed. In the present study, grades 7, 8 and 9 were involved giving a somewhat greater age spread. Very distinct differences in age, grade, sex, and grades achieved were observed for Users and Non-users. Students categorized in the User group tended to be older, more likely to be ninth graders and to be males rather than females. One-fourth of the User group described their school grades as "below average" or "very low" compared with only 5% of the Non-user group. About 59% of the students in the User group were males compared with 47% males in the Non-user group. Students in the User group were substantially older than students in the Non-user group. Forty-one percent of the users were age 14 while an additional 28% were age 15. Comparable figures for the Non-user group were 37% and 6%.

Table 21 summarizes responses of Users and Non-users.

Table 21
Questionnaire Responses of Junior High
Marijuana Users and Non-Users
(percent)

Question	Response	Users N=70	Non-Users N=865
Do you feel that you are adequately informed about drugs?	Yes, know all I need to know.	56%	25%
	No, but I'm not particularly interested.	6	19
	No, would like to learn more.	34	53
	Other	4	4
Where did you get most of your information about drugs? (multiple responses)	School classes	14	53
	Friends	66	23
	Family	7	14
	Church	1	8
	Books, magazines, newspapers	19	48
	Doctors or nurses	3	2
	TV and movies	7	32
	Youth groups outside of school or church	6	2
	Personal experience with drugs	47	6
	Some other source	10	5
What kinds of information about drugs would you like to have? (multiple responses)	Physical effects of various drugs	50	68
	Psychological or personality effects of various drugs	30	46
	Why people use drugs	14	44
	Laws regarding drugs; what they are, penalties for violations	40	40
	Personal experiences of people who have used drugs.	24	54
	Research on drug use	19	26
	Treatment of addicts	27	45
	Social aspects of drug use and abuse	9	20
	History of drug usage throughout the world	23	28
	Medical aspects of drug use	14	28
	Other topics	11	2

Users were identified as those students responding "used several times" or "use regularly" to the question, Have you ever used marijuana, pot, grass? Non-users responded "never use" to the same question. All suspected invalid responses were eliminated from the sample.

Table 21 (continued)

Question	Response	Users N=70	Non-Users N=865
If I had a serious question about drugs, for an answer, I would most likely go to:	I don't know who I would go to	5%	15%
	My parents	3	30
	My teacher	2	3
	My counselor	2	3
	My minister, priest or rabbi	0	2
	Doctor or nurse	2	11
	School social worker	0	a
	My friends	48	8
	Acquaintances who have used drugs	22	6
	Other relatives	0	a
	Library or reference books	0	5
	YES Center or another walk-in counseling center	15	10
	School liaison officer	2	4
	Somebody else	2	2
Drug education:	Should be required for all students	19	38
	Should be available to those students who want it	69	53
	Should not be taught in the schools	12	10
Have you ever actually seen a marijuana cigarette?	Yes	99	38
Have you ever actually seen LSD?	Yes	90	22
Do you know the meaning of the following terms? (percent responding "yes")	Pot	97	89
	Yellow Jackets	68	25
	Roach	62	9
	Speed	96	89
	Bad trip	94	89
	Mary Jane	91	59
	Acid	96	85
	H	74	44
	Hallucinogen	74	41
	Minnesota Green	88	33
	Flashback	84	56

a Less than 1%

Table 21 (continued)

Question	Response		Used Once	Used Several Times	Use Regularly	Never Use
Have you ever used any of these or not?	Alcohol(beer, wine,whiskey)	Users	8%	68%	23%	2%
		Non-users	27	43	4	27
	Tobacco(cigars, cigarettes,etc)	Users	3	37	60	0
		Non-users	25	27	5	42
	Marijuana, pot, grass	Users	0	79	21	0
		Non-users	0	0	0	100
	LSD, STP, mescaline,speed	Users	32	25	2	41
		Non-users	a	0	0	100
	Benzedrine, dexadrine, methadrine, cocaine, pep pills	Users	24	29	2	46
		Non-users	2	a	0	98
	Glue, gasoline, aerosol paint thinner(as inhalants)	Users	16	26	3	55
		Non-users	5	3	a	92
	Barbiturates or tranquilizers	Users	24	24	3	50
		Non-users	2	3	a	95
	Morphine or heroin	Users	18	3	2	77
		Non-users	a	a	a	99
	Sleeping Pills	Users	24	28	6	42
		Non-users	8	4	a	88
	Aspirin	Users	9	43	31	18
		Non-users	4	5	17	14
	Cough syrup	Users	14	44	19	23
		Non-users	7	66	9	18

a Less than 1%

Table 21 (continued)

Question	Response	Users N=70	Non-Users N=865
Whether you have used them or not, do you consider these things harmful, or not?	Alcohol(beer,wine,whiskey)	51%	50%
	Tobacco(cigarettes,cigars, etc.	79	89
	Marijuana, pot, grass	28	91
	LSD, STP, mescaline, speed	88	98
	Benzedrine, dexadrine, methadrine, cocaine, pep pills	80	95
	Glue, gasoline, aerosol paint thinner (as inhalants)	83	94
	Barbiturates or tranquilizers	69	89
	Morphine or heroin	87	97
	Sleeping pills	47	71
	Aspirin	19	27
	Cough syrup	21	24
Have you ever had a bad trip?	Yes	39	2
Do you know anyone who has?	Yes	88	32
How much do you think an ounce of marijuana costs?	About 25¢	8	4
	$ 1.00	12	9
	2.00	8	7
	3.00	2	8
	5.00	30	31
	15.00	33	17
	25.00	5	10
	50.00 or more depending on the quality	3	14
About how much does an LSD tablet or cap cost?	$ 1.00	3	3
	3.00	45	8
	5.00	17	16
	8.00	8	8
	10.00	13	18
	Don't know		

Table 21 (continued)

Question	Responses	Users N=70	Non-Users N=865
What percentage of the students in your school do you think has tried these things at least once? (median response)	Alcohol (beer, wine, whiskey)	90	80
	Tobacco (cigarettes, cigars, etc.)	90	80
	Marijuana, pot, grass	50	20
	LSD, STP, mescaline, speed	20	10
	Benzedrine, dexadrine, methadrine, cocaine, pep pills	20	10
	Glue, gasoline, aerosol paint thinner (as inhalants)	20	20
	Barbiturates or tranquilizers	20	15
	Morphine or heroin	10	10
	Sleeping pills	25	20
	Aspirin	99	99
	Cough syrup	99	99
Do you think that the general concern about drug use among teenagers is:	Much greater than it should be	36	15
	Somewhat greater than it should be	14	11
	As it should be	21	17
	Somewhat less than it should be	11	25
	Much less than it should be	11	14
	Don't know	8	18
Do you really think there is a serious drug problem among the students in your school?	Yes	28	20
How would you feel if your younger brother or sister smoked marijuana?	Don't have younger brothers or sisters	22	29
	I would be disturbed	23	52
	I wouldn't worry about it	42	8
	Other	14	11
Do you think the use of marijuana or pot should be legalized?	Yes, legalize it	76	10
	No, should not be legalized	9	64
	I'm not sure	13	23
	Other answers	2	3

Table 21 (continued)

Question	Response	Users N=70	Non-Users N=865
How do you feel about alcohol and marijuana?	Both are harmful but alcohol is more harmful than marijuana	25%	5%
	Both are harmful but marijuana is more harmful than alcohol	10	47
	Both are equally harmful	6	28
	Alcohol is harmful but marijuana is not	22	7
	Marijuana is harmful but alcohol is not	6	12
	Neither is particularly harmful	30	8
Do you think a person can become addicted or "hooked" from smoking marijuana?	Yes, can become addicted to marijuana	11	34
	Yes, in the sense that it usually leads to the use of harder drugs	19	46
	No; no more than a person becomes hooked on cigarettes	57	16
	Other answer	13	5
What would your reaction be if marijuana was legalized?	I wouldn't try it even if it were legal	10	66
	I might try it if it were legal but not unless it was legalized	8	10
	The legality of it doesn't influence me. I'll smoke it, or not smoke it, as I please	79	14
	I don't know	3	10
How old were you on your last birthday?	Eleven	2	1
	Twelve	3	8
	Thirteen	26	48
	Fourteen	42	37
	Fifteen	28	6
	Sixteen		4
What grade are you in?	Seven	2	14
	Eight	66	73
	Nine	33	13

Table 21 (continued)

Question	Response	Users N=70	Non-Users N=865
What is your sex?	Male	59%	47%
	Female	42	53
Which of the following best describes the grades you usually receive in school?	Excellent	6	9
	Above average	29	46
	Average	40	41
	Below average	22	4
	Very low	3	a

a Less than 1%

Student Views of a Drug Curriculum

About nine out of ten students felt that drug education should be taught in the schools but the majority of students felt that it should be an elective course rather than a mandatory one. This reaction varied with grade level. Most senior high school students (56%) felt that drug education should be required for all students but only 35% of the junior high school students felt that it should be required. Fifty-four percent of the junior high school students felt that it should be made available to those who wanted it, while 38% of the senior high school students agreed with this idea. In either event, there appears to be roughly 40% to 50% of the students who do not feel that a drug education program should be mandatory.

When asked to name the kinds of information students want to receive, a wide variety of responses were given. Most of these responses focussed on the effects of drugs. About two-thirds of the students wanted to know about the physical effects. Slightly less than half the students wanted to know about psychological or personality effects. Half the students reported that they would be interested in the personal experiences of people who had used or who were using drugs and about four out of ten students wanted to know about treatment, laws, and why people use drugs. About three out of ten students were interested in the history and the medical aspects of drugs and from two to three out of ten wanted to know about research on drugs and the social aspects of drugs and drug abuse. Only minor differences occurred between senior and junior high school students. More senior high school students were interested in the psychological and personality effects of drug use while more junior high school students were interested in why people use drugs. See Table 22.

One thousand eight hundred and ninety-three (1,893) students in five high schools and three junior high schools were asked what the schools could do to help their younger siblings develop healthy attitudes toward drugs.(The precise wording of the question was, "What can the schools do to help your younger brothers and sisters develop healthy and realistic attitudes about drugs? Use your definition of "healthy and realistic." If you don't have younger brothers and sisters, pretend you do.") About half the students made write-in responses to this question offering over 1,000 suggestions.

Responses to this open-ended question were analyzed by means of content analysis. Individual thought units were written on separate sheets of paper and sorted into a large number of subject matter categories. Similar subject categories were then "collapsed" into a smaller number of more meaningful categories. Table 23 shows the results of this procedure. Labels given to the response categories actually cover a broad range of response which were judged to have similar meanings. Thus, "stress bad effects" would include responses such as: Tell them how drugs hurt you, point out the harmful effects of using drugs, show how drugs can damage your health, and similar comments.

Two major ideas accounted for most responses. First, about one-fourth of the students said that the bad effects of the drugs should be heavily stressed. Second, about one-fifth of the students said that presentations should give both the positive and negative sides of drug use; avoid scare tactics, present all the facts and let the student make up his own mind.

Table 22

What kinds of information about drugs would you like to have?
(percent)

Kind of Information	Jr. High (No.=1254)	Sr. High (No.=172)	Jr. & Sr. High (No.=1426)
Physical effects	66%	69%	66%
Personal experiences of people who have used drugs	49	53	50
Psychological or personality effects	44	58	46
Treatment of addicts	42	38	42
Why people use drugs	41	31	40
Laws regarding drugs; what they are; penalties for violation	40	34	40
History of drug usage throughout the world	28	24	28
Medical aspects of drug use	28	27	28
Research on drugs	25	23	25
Social aspects of drug use and abuse	19	21	20
Other topics	4	6	4
All Responses	386%	384%	389%

Note: Percentages are underestimates since non-respondents were included in calculations

Percentages add to more than 100% because of multiple responses.

Table 23
What can the schools do to help your younger brothers and sisters develop healthy and realistic attitudes about drugs? (Use your definition of "healthy and realistic"). If you don't have younger brothers and sisters, pretend you do.
(percent of students responding to the question)

Response	Students in 3 Jr. Highs (N=540)	Students in 5 Sr. Highs (N=396)	Jr. and Sr. H.S. Students (N=936)
Stress bad effects	23%	27%	24%
Give facts; present both sides; don't use scare tactics	16	27	22
Start drug education at an earlier age	13	9	11
Use movies	7	9	8
Emphasize effects of drugs	4	5	5
Teach special courses on drugs	5	4	5
Use addicts as speakers	4	5	4
Have speakers	a	2	1
Show the drugs	a	1	1
Miscellaneous	39	30	33
All Responses	111%[b]	119%[b]	114%[b]

a Less than 1%
b Totals add to more than 100% because some students gave more than one response to the question

Senior high school students were more inclined to request a balanced presentation than were junior high school students.

About one out of ten students said that drug education should begin earlier. A variety of grades and age levels were suggested extending from fourth grade through junior high. Other suggestions that were reported by a substantial number of students were: use movies (8%), describe the effects (5%), give a specific course on drugs (5%), and bring in addicts or people who have used drugs to talk to the students (4%).

What Kinds of Training Should Be Given to Teachers?

Students were asked to make recommendations for specific kinds of training or advice to be given to teachers who are going to teach drug education to students of their age. The most typical response of both junior and senior high school students, as determined by content analysis techniques, was that the teachers should, "know everything." In a number of ways students indicated that they expected a great deal of their teachers and that if teachers were not really expert at teaching about drugs they should either not be teaching the subject or they should bring in people who are experts. As one high school student put it, "they should know about 100% so they can say how bad and how good it is." Another student said, "they should know more about the drug because they are always looking in different kinds of books for the answer, and I think that they should try and get someone who has used drugs."

Some students also emphasized that teachers should give the facts and not try to emphasize the harm caused by drugs or to use scare tactics. " I don't think kids should be scared into not using drugs. I think they should teach that drugs are like a crutch, some can be depended upon. I think they should try to teach why people use them." In contradiction to what students felt the schools should do for their younger siblings a relatively small percentage of students said that teachers should be taught to emphasize the harmfulness of drugs.

About one out of five students suggested that teachers be trained by addicts or people who had been users of drugs. "I think people should come in who have actually taken the drugs and let questions be asked." Responses by senior and junior high school students were quite similar with perhaps somewhat greater emphasis on the factual approach at the senior high school level and on "knowing everything" at the junior high school level.

No other suggestion was made by a large number of students. Between 5% and 10% suggested that the teachers should have special courses, should try drugs themselves, should understand the reasons or motivations underlying the use of drugs, and should have more literature. (See Table 24).

Students were asked if they had any additional suggestions on how drug education could be improved. Comments elicited by this question suggested that a number of students were interested in having ex-addicts speak to the students, having additional films or audio-visual aids related to drugs, and-particularly at the junior high school level-spending more time on the topic. (See Table 25).

Table 24

What specific kinds of training or advice should be given to teachers who are going to teach drug education to students your age?
(Percentages based on number of students responding to the question)

Response	Jr. High (No. =479)	Sr. High (No. =247)	TOTAL (No. =726)
Should know everything	27%	21%	25%
Tell it like it is	15	24	18
Training by addicts, ex-addicts	17	19	18
Emphasize harmfulness	7	6	7
Describe effects	8	5	7
Miscellaneous	7	9	8
Understand reasons, motivations	6	7	6
Have teachers try drugs	5	5	5
Special courses for teachers	4	5	5
More literature	3	9	5
Have speakers	1	6	2
Discourage students to use drugs	3	a	2
Show samples of drugs	3	2	2
None; nothing	2	2	2
Make it more interesting	1	3	2
Don't teach the course	1	3	2
Movies	1	2	1
All Responses	111%[b]	128%[b]	117%[b]

[a] less than 1%

[b] totals add to more than 100% because some students gave more than one response to the question.

Table 25

Do you have any other suggestions for improving drug education?

(Percentages based on number of students responding to the question)

Response	Jr. High (No. =137)	Sr. High (No. =311)	TOTAL (No. =448)
Ex-addicts speak	19%	20%	20%
Have films; AV	6	22	17
Tell it like it is	10	8	9
Have speakers	5	10	9
Field Trips	a	3	2
Samples	4	5	5
Effects	4	3	4
Teach at an early age	4	7	6
More time; more information; more discussions, etc.	28	6	13
Don't legalize any drugs	3	1	2
Teach everything	4	3	3
Need better teachers	4	3	3
Have special class	4	3	3
Show examples of particular cases	a	2	1
Panel discussions	a	4	2
Miscellaneous	7	25	17
All Responses	102%[b]	125%[b]	116%[b]

[a] less than 1%

[b] totals add to more than 100% because some students gave more than one response to the question.

What About Your Present Drug Education Classes?

About 300 students in 4 high schools were asked what they missed in junior high school in drug education that would have been helpful. (Questionnaire C-administered by the Health and Physical Education Department). Almost one-third said that they did not have drug education or that the drug education they did have was very limited. About one out of five said that they did not miss anything or not much. No other response was made by a substantial number of students.

These same students were asked what type of presentation in their health class gave them the most information about drugs. The overwhelmingly favored response was movies and filmstrips (57%). As one student indicated "we had a movie that had a lady who had been an addict for about 15 years. She really was frank and taught me a lot." Another student said, "Florence Fisher on TV convinced me never to do anything like she did." "Get movies and show withdrawal (painfully). They are never too young to see the truth."

About 14% of the students said that discussions were particularly informative while about 11% said printed materials were and 10% said nothing worthwhile was presented. Only 5% said that addicts and ex-addicts as speakers gave them the most information. Whether this response was because of the lack of use of addicts as speakers or because of the reaction to the speakers themselves is not known.

The favorable response to films is supported by the Pell data. Pell asked students what source of drug information they preferred. Films were favored by 53% of the students while speakers were second with 25% and friends were third with 11% of the students responding.

The fact that the majority of the students get most of their information from school classes while few students see their teachers or counselors as resource people for serious questions about drugs seems, on the face of it, paradoxical. However, the highly favorable response to films and the extensive use of books and magazines for drug information suggests that students are getting most of their drug information in the schools from sources other than the teacher directly and personally. Apparently, teachers are seen as resource people about drugs to the extent that they arrange for the showing of films and for the distribution of pamphlets and other kinds of materials about drugs. The strong cry from students that the teachers should "know everything" suggests that they do not see the classroom teacher, or even the health teacher, as knowledgeable about drugs. Pell asked students which person they thought was most qualified to speak to groups about drugs. Unfortunately he did not list teachers in his response categories, but he did include present or former drug users, doctors, druggists, police or a panel or a combination of these people. Within the restrictions of the question wording, users or former users and a panel or a combination of the people listed was preferred by nearly all of the students.

Student reaction to drug education programs was also explored in the Pell questionnaire. About 9% of the students said that the school programs were irrelevant and meaningless and an additional 23% said that they were not sure of their feelings about the school drug programs. The remaining 68% of the students gave varying responses all indicating at least some degree of relevance and meaningfulness for these courses.

Recommendations

For the most part the recommendations listed below are based upon student responses to questions regarding a drug education curriculum. Questions in this area were considered to be fairly representative of all eleventh grade students in the Minneapolis High Schools. Recommendations related to drug usage, knowledge and attitudes are on less firm grounds since they cannot be taken as representative of all Minneapolis Junior and Senior high school students.

Additional suggestions, compiled by a group of senior high students who participated in a Drug Awareness Seminar, are contained in the report "Students Recommendations for Drug Awareness Programs." (Minneapolis Public Schools, Summer 1970). Student recommendations from the seminar and the survey are consistent and complementary.

1. Recommendation: Drug education should emphasize a factual approach.

   Comment: Students consistently stressed a need for a factual, non-scare, non-moralizing approach. Although a substantial number suggested that their younger brothers and sisters be told how bad drugs are, they insisted that their own education be a balanced one, presenting positive and negative aspects of drugs.

2. Recommendation: The curriculum should emphasize the effects of drugs.

   Comment: The most frequently requested information about drugs was knowledge of their physical effects. Closely followed by this was the request for information on personality and psychological effects. Other topics important to large numbers of students were why people use drugs, laws related to drugs, and treatment. Information related to history of drug use, medical aspects, research on drugs, and social aspects of drug use were seen as important by about one fourth of the students.

3. Recommendation: The teacher's role in drug education should be clearly defined.

   Comment: Most students, particularly those at the junior high school level, insist that teachers be experts in the area of drug knowledge. Because of the complexity and the ever changing nature of drug information it seems that this desirable goal can never be reached. Therefore, it is important, that at the start of their drug education, students be informed that the teacher will act as a resource person and a coordinator for other resources. The teacher should not be presented as an expert on drugs, unless in fact, he is.

4. Recommendation: Experts in drug knowledge should be made available to the teaching staff if it is to fulfill its role in informing students of drugs.

Comment: The Minneapolis Public School proposal to establish Chemical Awareness and Prevention teams consisting of experts in drugs, teachers and students appears to be a good one in light of the students' demands for expert knowledge.

5. Recommendation: All planning for drug education curriculum should take into account the fact that half the students might not be interested in the topic.

Comment: About 30% of the students already feel that they know all there is to know about drugs, or at least know as much as the schools can offer. Another 20% state that they are simply not interested in the topic. Despite these reactions, nearly all students feel that the schools are an appropriate agency for providing drug education. School classes are a major source of drug information for most students.

6. Recommendation: More effort should be directed toward describing the effects of supposedly harmless agents, such as aspirins, sleeping pills, and alcohol. Greater information is needed about the effects of marijuana.

Comment: The present sources of information on the uses and effects of hard drugs such as heroin appear to be effective. The public information provided about the harmful effects of tobacco also appears to have been effective. However, many students appear to believe that aspirins, tranquilizers, alcohol, sleeping pills and marijuana are harmless. Attention to these so called softer drugs should not reduce the present emphasis on the effects of harder drugs.

7. Recommendation: Any drug curriculum should take into account male-female differences.

Comment: Female students appear to be more knowledgeable about drugs, to be more interested in the topic, and to be more likely to turn to the school for information about drugs. Females are also more likely to go to the teacher with serious questions about drugs although even here a small minority of students will go to the teacher. At the same time, females make greater use of patent medicines, such as sleeping pills and tranquilizers, there is a suggestion that they tend to smoke more, and although they are against the legalization of marijuana in greater numbers, they typically take a more benign view of the use of drugs in general than do males. Females are however, much more against the use of alcohol than are male students.

8. Recommendation: The distinction made between marijuana and other drugs by many students should be recognized by those developing curriculum in drugs.

Comment: It is noted that even students who are marijuana users have generally unfavorable attitudes about hard drugs. That is, they tend to see most other drugs as harmful. It is probable that student conceptions of marijuana closely reflect those conceptions held by adults. Since there is no clear cut consistent body of expert knowledge about the positive and negative effects of marijuana, the students themselves are confused about just what it can do to them. There is no surgeon general report indicating that marijuana is harmful to your health-as there is for tobacco. A recent national health commission on this topic does not serve to clarify the harm or value of marijuana among either adults or young people. In view of the uncertainty about just what marijuana is and does, it is not classified by many young people with drugs such as heroin where the results are very obviously harmful. Whether educators agree with this distinction or not, they should be aware that it exists.

9. Recommendation: Consideration should be given to devoting more time to drug education at the junior high school level and possibly at the elementary school level.

Comment: Present junior high school offering are obviously too limited.

10. Recommendation: Drug education curriculum at the junior high school level should probably not be mandatory.

Comment: If mandatory education on this topic is desirable then it should be at the senior high school level since most high school students would agree that it is desirable.

11. Recommendation: Consideration should be given to publicizing the results of the survey to students.

Comment: The survey shows that most students think that more of their peers are marijuana users than the actual figures suggest. The finding that most students are against the legalization of marijuana may also be one which is a surprise to many students. Such information may help students to put their own feelings into perspective as they relate to their peers.

12. Recommendation: Since most parents do not have the information to supply students with answers, it may be desirable to conduct a series of parent education programs on drug information.

Comment: Possibly TV courses on drug information with opportunities for parents to phone or write in questions would be more appropriate than those in which the parent is actually in attendance since previous attempts in this area have resulted in relatively little success.

13. Recommendation: Reconsider whether or not a city-wide survey on drugs is needed.

Comment: A survey is not needed to inform us that student use of drugs demands attention although possibly this pilot survey helped put some perspective on the degree to which a drug problem exists in Minneapolis Public Schools. Additional surveys on student use would only serve to refine estimates of the extent of the problem.

Information on variations in drug use from year to year, and from community to community may be desirable. Such information could be obtained from relatively small surveys conducted periodically, perhaps every two years or it may be desirable to include the drug questions in a periodic questionnaire which aims at tapping student opinions about a wide range of topics.

Curriculum suggestions probably represent the views of students throughout the city-at least for eleventh graders. Suggestions from a drug seminar composed of twelfth grade students were consistent with suggestions from the surveyed students. Additional suggestions for curriculum revision would probably be obtained better from panels, seminars, or the Drug Awareness Committee, which includes students.

Information on students attitudes toward drugs and their sources of information about drugs may not represent the views of students throughout the city. A broader sampling on these topics may be desirable.

APPENDIX A

Drug Questionnaire
Form A

PLEASE DO NOT SIGN YOUR NAME

This questionnaire has two purposes:

1. To obtain information for improving drug education. Results will be used by the Minneapolis Public Schools, the University of Minnesota, and the Public Health Department.

2. To get your reaction to the wording of the questionnaire. Your school is acting as a pilot school for a city wide survey which will be conducted next year. We want to know if the questions make sense, if the language is understood and if we should be asking other, perhaps more important, questions.

Since there are a number of legal and moral differences of opinion about drugs, completion of this questionnaire is voluntary.

We do not want to obtain information about individuals. Therefore, we are asking that you do not sign your name. Individual school results will not be reported by name.

5/70

Minneapolis Public Schools
Research Division

PLEASE DO NOT SIGN YOUR NAME

Minneapolis Public Schools

Listed below are a number of questions about drugs. Most responses call for a check mark or an X. Beneath each question there is space for your reaction to the question wording. Does it make sense? Is the meaning clear? Does the language turn you off? etc.

The questionnaire is coded for machine data processing, but each written response will be read. Write on the questionnaire any place you find room.

Column

A 1. Do you feel that you are adequately informed about drugs?

_____1 Yes, know all I need to know

_____2 No, but I'm not particularly interested

_____3 No, would like to learn more

_____4 Other, explain_____

Comment: What is your reaction to this question? Does it make sense?

_____

_____

_____

B 2. Where did you get most of your information about drugs?

_____1 school classes

_____2 friends

_____3 family

_____4 church

_____5 books, magazines or newspapers

_____6 doctors or nurses

_____7 TV and movies

_____8 youth groups outside of school or church

_____9 personal experience with drugs

_____0 some other source

Comment:_____

_____

_____

_____

Column

C What kinds of information about drugs would you like to have? (Check as many as apply)

3. _____physical effects of various drugs

4. _____psychological or personality effects of various drugs

5. _____why people use drugs

6. _____laws regarding drugs; what they are, penalties for violations

7. _____personal experiences of people who have used drugs

8. _____research on drug use

9. _____treatment of addicts

10. _____social aspects of drug use and abuse

11. _____history of drug usage throughout the world

12. _____medical aspects of drug use

13. _____other topics, specify_____

Comment:_____

_____

_____

D 14-15. If I had a serious question about drugs, for an answer, I would most likely go to: (check one)

_____01 I don't know who I would go to

_____02 my parents

_____03 my teacher

_____04 my counselor

_____05 my minister, priest, or rabbi

_____06 doctor or nurse

_____07 school social worker

_____08 my friends

_____09 acquaintances who have used drugs

_____10 other relatives

_____11 library or reference books

_____12 Y.E.S. Center or another walk-in counseling center

_____13 school liaison officer

_____14 somebody else, specify_____

Comment:_____

_____

_____

Column

E 16. Drug education:

_____1 should be required for all students

_____2 should be available to those students who want it

_____3 should not be taught in the schools

Comment:_____

_____

_____

F 17. Have you ever actually seen a marijuana cigarette?

_____1 Yes _____2 No

Comment:_____

_____

_____

G 18. Have you ever actually seen LSD?

_____1 Yes _____2 No

Comment:_____

_____

_____

H Do you know the meaning of the following terms: (Check whether you know or don't know each of the terms listed below)

		Know	Do Not Know
19	pot	1____	2____
20	yellow jackets	1____	2____
21	roach	1____	2____
22	speed	1____	2____
23	bad trip	1____	2____
24	Mary Jane	1____	2____
25	Acid	1____	2____
26	H.	1____	2____
27	hallucinogen	1____	2____
28	Minnesota Green	1____	2____
29	flashback	1____	2____

Comment:_____

_____

_____

Column

I Have you ever used any of these or not? (Check one of the first four columns below).

J Whether you have used them or not, do you consider these things harmful or not? (Check yes or no in columns to the right, below)

		I. USE				J. HARM		
		Used Once	Used Several Times	Use regularly	Never Use	Is it Harmful? Yes	No	
30	alcohol (beer, wine, whiskey)	1	2	3	4	1	2	41
31	tobacco (cigarettes, cigars, etc)	1	2	3	4	1	2	42
32	marijuana, pot, grass	1	2	3	4	1	2	43
33	LSD, STP, mescaline, speed	1	2	3	4	1	2	44
34	benzadrine, dexadrine, methadrine, cocaine, pep pills	1	2	3	4	1	2	45
35	glue, gasoline, aerosol paint thinner (as inhalants)	1	2	3	4	1	2	46
36	barbiturates or tranquilizers	1	2	3	4	1	2	47
37	morphine or heroin	1	2	3	4	1	2	48
38	sleeping pills	1	2	3	4	1	2	49
39	aspirins	1	2	3	4	1	2	50
40	cough syrup	1	2	3	4	1	2	51

Comment: _____

_____

_____

K 52. Have you ever had a bad trip?

_____1 Yes _____2 No

Comment: _____

_____

_____

L 53. Do you know anyone who has?

_____1 Yes _____2 No

Comment: _____

_____

_____

Card 2

M 1. How much do you think an ounce of marijuana costs?

_____1 About 25 cents
_____2 $1.00
_____3 $2.00
_____4 $3.00
_____5 $5.00
_____6 $15.00
_____7 $25.00
_____8 $50.00 or more, depending on the quality

Comment: _____

N 2. About how much does an LSD Tablet or Cap cost?

_____1 $1.00
_____2 $3.00
_____3 $5.00
_____4 $8.00
_____5 $10.00
_____6 Don't know

Comment: _____

O What percentage of the students in your school do you think has tried these things at least once? Enter the percentage in each space below.

		PERCENTAGE
3-4.	alcohol (beer, wine, whiskey)	____
5-6.	tobacco (cigarettes, cigars, etc.)	____
7-8.	marijuana, pot, grass	____
9-10.	LSD, STP, mescaline, speed	____
11-12.	benzadrine, dexadrine, metha-drine, cocaine, pep pills	____
13-14.	glue, gasoline, aerosol paint thinner (as inhalants)	____
15-16.	barbiturates or tranquilizers	____
17-18.	morphine or heroin	____
19-20.	sleeping pills	____
21-22.	aspirins	____
23-24.	cough syrup	____

Comment: _____

P 25. Do you think that the general concern about drug use among teenagers is:

_____1 much greater than it should be

_____2 somewhat greater than it should be

_____3 about as it should be

_____4 somewhat less than it should be

_____5 much less than it should be

_____6 don't know

Comment:_____

_____

_____

Q 26. Do you really think there is a serious drug problem among the students in your school?

_____1 Yes _____2 No _____ 3 Don't know

Comment:_____

_____

_____

R 27. How would you feel if your younger brother or sister smoked marijuana?

_____1 don't have younger brother or sister

_____2 I would be disturbed

_____3 I wouldn't worry about it

_____4 other , specify_____

Comment:_____

_____

_____

S 28. Do you think the use of marijuana or pot should be legalized?

_____1 yes, legalize it

_____2 no, should not be legalized

_____3 I'm not sure

_____4 other answers (explain)_____

Comment:_____

_____

_____

T 29. How do you feel about alcohol and marijuana?

_____1 both are harmful, but alcohol is more harmful than marijuana

_____2 both are harmful, but marijuana is more harmful than alcohol

_____3 both are equally harmful

_____4 alcohol is harmful, but marijuana is not

_____5 marijuana is harmful, but alcohol is not

_____6 neither is particularly harmful

Comment:_____

_____

_____

U 30. Do you think a person can become addicted or "hooked" from smoking marijuana?

_____1 yes, can become addicted to marijuana

_____2 yes, in the sense that it usually leads to the use of harder drugs

_____3 no; no more than a person becomes hooked on cigarettes

_____4 other answer (explain)_____

Comment:_____

_____

_____

V 31. What would your reaction be if marijuana were legalized?

_____1 I wouldn't try it even if it were legal

_____2 I might try it if it were legal, but not unless it were legalized

_____3 The legality of it doesn't influence me. I'll smoke it, or not smoke it, as I please

_____4 I don't know

Comment:_____

_____

_____

Column

W 54. How old were you on your last birthday?

_____1 Eleven _____5 Fifteen

_____2 Twelve _____6 Sixteen

_____3 Thirteen _____7 Seventeen

_____4 Fourteen _____8 Eighteen

X 55. What grade are you in?

_____1 Seven _____4 Ten

_____2 Eight _____5 Eleven

_____3 Nine _____6 Twelve

Y 56. What is your sex?

_____1 Male

_____2 Female

Z 57. Which of the following best describes the grades you usually receive in school?

_____1 Excellent _____3 Average

_____2 Above Average _____4 Below Average

_____5 Very Low

PLEASE DO NOT WRITE BELOW THIS LINE

58-9. ___ ___

60. Card No 2

77-80 ___ ___ ___ ___

What specific kinds of training or advice should be given to teachers who are going to teach drug education to students your age?

What can the schools do to help your younger brothers and sisters develop healthy and realistic attitudes about drugs? (Use <u>your</u> definition of "healthy and realistic"). If you don't have younger brothers and sisters, pretend you do.

Do you have any other suggestions for improving drug education?

Do you have any additional suggestions for improving this questionnaire?

APPENDIX B

Instructions for Administering Drug Questionnaires

Minneapolis Public Schools

INSTRUCTIONS for Administering Drug Questionnaires

This Drug Survey is being conducted in two high schools and three junior high schools as a preliminary to a city wide survey which will be conducted next year. One of the basic purposes for the preliminary survey is to get a reaction to the wording of the questions. For this reason, two forms of the questionnaire are used. Form A is identified by the words Research Division, Minneapolis Public Schools in the lower right corner of the top sheet. Form B is identified by the words Administered by the Research Division, Minneapolis Public Schools in the lower right corner.

Questionnaires should be distributed alternately so that every other child gets Form A and the remaining children get Form B.

The instructions for administering Form A are simple. All answers are to be written directly on the questionnaire. Students may write any place on the paper that they wish. Pen or pencil may be used.

Form B has a separate answer sheet for Items 1 - 109. Responses to this questionnaire should be filled in with soft lead pencil according to instructions on the answer sheet. Beginning with Item 110 responses are to be written in the questionnaire booklet. It is important that the answer sheet for Form B be inserted in the questionnaire when it is turned in. There is no other way to relate the items from 110 on to the other items unless this is done.

Students should be informed that answering the questionnaire is voluntary. Those students who do not wish to complete the questionnaire should be given some other assignment. It is also important that students feel that they have privacy in completing the questionnaire to the best of your ability to convey this idea within the limitations of the space available. It is recommended that teachers ask students not to look at other students' papers and that no monitoring of responses be made by the teacher.

We would appreciate very much having your reaction to this questionnaire. If you have comments about it would you please write them on the reverse side of this paper and return them to the Research Division. We would also like to know the number of students who refused to complete the questionnaire and the name of the school.

Your cooperation is appreciated.

Number of students who refused to complete form_____

School_____

Teacher's Comments_____

_____

_____

(please use other side for any further comments)

Return to: Research Division
Room 315
807 N. E. Broadway
336-1738

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